

**REMARKS**

This paper is being filed in response to the Office Action, dated April 29, 2004, that was issued in connection with the above-identified application. Applicants respectfully request entry and consideration of the amendments and remarks presented herein.

Claims 1, 3-4, 8-19, 22, 46-47, and 51-55 are pending in the instant application. Claims 2, 6, 7, 48-50, and 54 have been cancelled herein without prejudice or disclaimer. Claims 1, 3, 4, 9, 11, 12, 14, 47, and 52 have been amended herein. The amendments to the claims are supported by the specification as initially filed, and, therefore, do not constitute new matter.

As a preliminary matter, Applicants thank the Examiner for acknowledging that Applicant's priority claim to French Application No. 98/0493 is valid. Applicants also thank the Examiner for withdrawing the earlier anticipation and obviousness rejections.

**Claim Amendments Are Fully Supported By the Application**

Claim 1 has been amended herein in several respects. Recitation of "peptide fragment" was suggested, at least tacitly, by the Examiner in the Office Action dated November 4, 2003 at page 4, last paragraph. Support for the Xaa moiety as now claimed may be found in the specification in original claim 2. Support for the Xab moiety as now claimed may be found in the specification in original claim 1. Support for the Xac moiety as now claimed may be found in the specification in original claim 7 and paragraph [0014]. Support for the Xad moiety as now claimed may be found in the specification in original claim 6. Support for the Xae moiety as now claimed may be found in the specification in original claim 11. Support for the Xaf moiety as now claimed may be found in the specification in original claim 12. Support for

the Xag moiety as now claimed may be found in the specification in original claim 1. Support for an isolated peptide with antifungal activity as now claimed may be found in the specification as filed at, for example, Example III.

Claim 11 has been amended herein. Support for this amendment may be found, for example, at paragraph [0018]. Claim 14 has been amended herein. Support for the amendment to claim 14 may be found in the specification at, for example, paragraph [0026]. Claim 47 has been amended herein. Support for this amendment may be found, for example, at paragraph [0009]. Claim 52 has been amended herein. Recitation of "peptide fragment" was suggested, at least tacitly, by the Examiner in the Office Action dated November 4, 2003 at page 4, last paragraph. Accordingly, the claim amendments made herein do not constitute new matter.

**New Matter Rejection Should Be Withdrawn**

Claims 1, 7, 11, 14, 50, and 52 have been rejected under 35 U.S.C. § 112, first paragraph as allegedly containing subject matter not described in the specification in such a way as to reasonably convey to one of ordinary skill in the art that the inventors had possession of the claimed invention. The Examiner has alleged that recital of the phrases "a variable number of amino acid residues," "Xac comprises at least one amino acid," and "extracellular or subcellular localization in a host organism" constitute new matter in that they allegedly were not set forth or described in the specification.

Applicants traverse this rejection and assert that the instant claims are fully supported by the application as filed. Claims 7 and 50 have been cancelled herein without prejudice or disclaimer, thereby rendering the rejection of these claims moot. Claims 1, 11, 14,

and 52 are fully supported by the application as filed. These claims, as amended herein, do not recite "a variable number of amino acid residues."

The Examiner has alleged that the "specification does not set forth that the C- or/and N-end of the claimed peptide comprising peptide extension(s) is necessary for said extracellular or subcellular localization." *See* Office Action dated April 29, 2004, page 3, last paragraph. Applicants disagree and respectfully invite the Examiner's attention to paragraphs [0025] to [0033] and [00139]. Support for signal peptides at either end of the heliomicine peptide may be found in paragraph [0025]. Literal support for a peptide at the amino terminus may be found in paragraph [0028]. Support for carboxy-terminal modifications may be found in paragraph [0026] wherein the cell membrane is specifically recited. Applicants assert that persons of ordinary skill in the art would recognize that lipidation (*e.g.* by isoprenylation of the carboxy-terminal motif –CAAX) is a common means of targeting proteins to the cell membrane. Therefore, Applicants assert that claim 14, as amended herein is fully supported by the application as filed.

**Written Description Rejection Should Be Withdrawn**

Claims 1-4, 6-19, 22, and 46-55 have been rejected under 35 U.S.C. § 112, first paragraph as allegedly containing subject matter not described in the specification in such a way as to reasonably convey to one of ordinary skill in the art that the inventors had possession of the claimed invention. The Examiner has alleged that the specification fails to describe the permutations of Xaa', Xaa''', Xab', Xae', Xag', and Xag where each comprises or consists of a variable number of amino acids. The Examiner has alleged that without a written description, one cannot know what number of amino acids is suitable for each moiety. The Examiner has,

however, indicated that this rejection may be overcome by reasonably defining the foregoing moieties and adding functional language to the claims.

Applicants traverse this rejection and assert that the claims, as amended herein, fully comply with the written description requirement. Claims 1-4, 6-19, 22, and 46-55, as amended herein, do not recite the phrase "variable number of amino acids."

Applicants respectively invite the Examiner's attention to Example 14 of the Written Description Guidelines issued by the USPTO. According to this Example, an application that discloses and claims a protein having an amino acid sequence that has a defined degree of structural identity (*e.g.* 95%) with a specific reference sequence complies with the written description requirement of § 112, first paragraph where (a) at least one specific example that has been actually reduced to practice is disclosed and (b) the claim recites a specific functional activity of the protein. The instant specification and claims clearly meet these requirements in providing the consensus sequence, Formula (I), six specific sequences of Formula I, working examples in Example III, and claims that recite functional activity. Applicants, therefore, respectfully request withdrawal of this rejection.

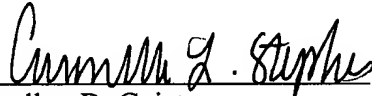
Applicants believe that the claims are in condition for allowance and, accordingly, respectfully request prompt, favorable action.

Although Applicants do not believe any fee is presently due, the Commissioner is hereby authorized to deduct any fees required with this submission not otherwise enclosed herewith from Deposit Account No. 02-4377. Two copies of this paper are enclosed.

Respectfully submitted,

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June 29, 2004

  
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